

9. HOW DO I COMPLY WITH THE DRINKING WATER REGULATIONS?

Types of
water
supplies
regulated
by the
SDWA

Some rural electric cooperatives rely on their own well or a surface water source to provide drinking water to their employees. However, some cooperatives (or their subsidiaries), provide water not only to their employees but to other businesses or people. If your cooperative does the latter, it may be subject to the requirements (see box) of the Safe Drinking Water Act (SDWA). This chapter will inform you of your responsibilities for compliance with the Federal SDWA regulations affecting your water supply.

APPLICABILITY OF THIS CHAPTER TO YOUR COOPERATIVE

This chapter does not apply to your cooperative if either of the following pertain to your drinking water supply:

- You provide drinking water—only for your employees—from a well or surface water source, and you have fewer than 25 employees,
- You obtain treated drinking water—only for your employees—from a municipal source, and that source is not a subsidiary of your cooperative.

The Safe Drinking Water Act was originally passed by Congress in 1974. It was amended in 1986 and again in 1996. Many components of the SDWA are intended to protect the public health and welfare by specifying treatment, monitoring, and public awareness requirements under the Public Water Supply Supervision (PWSS) program (see Section 9.1). The SDWA also establishes source protection programs which offer you the opportunity to become aware of, and involved in, efforts to protect your drinking water supply. This chapter will inform you of the major requirements under the PWSS program which may affect your system, and will provide descriptions of other SDWA programs which may affect your system, including source protection and funding assistance programs.

9.1 DOES THE PWSS PROGRAM APPLY TO MY COOPERATIVE?

The PWSS program is the means by which EPA regulates public water systems to fulfill the purposes of the SDWA. Under the PWSS program, EPA has established national drinking water regulations that set standards for contaminants in drinking water, and contain monitoring, public notification and recordkeeping requirements. The national drinking water regulations are discussed further in this section.

Definition of a PWS

Your cooperative is a Public Water System (PWS), and is subject to the requirements of the SDWA and the PWSS program if you provide water for human consumption to the public (including employees), and have:

- At least 15 service connections, or
- Regularly serve an average of at least twenty-five individuals daily at least 60 days out of the year.

Requirements under the SDWA vary according to type of PWS. Schedules of when rules become effective, timing and frequency of monitoring, and public notification requirements are specifically tailored to different types of PWSs. The different types of PWSs, and their definitions within SDWA regulations are described below.

- **Community water system (CWS)**—a PWS that serves at least 15 residential service connections or the same 25 people in their residences for at least 60 days of the year. Examples of community water systems include a large urban water system, or a small system serving a trailer park.
- **Transient non-community water system (TNC)**—a PWS that serves transient users (i.e., different people/users every day), but amounting to at least 25 people per day. Examples include campgrounds and highway rest-stops.
- **Non-transient non-community water system (NTNC)**—a PWS that, unlike a CWS, does not service residential populations, but serves the same individuals for at least six months out of the year. Examples include businesses, churches, or schools.

Possible types of systems your REC may be classified as.

Based on the above definitions, a rural electric cooperative supplying water to at least 25 employees (and no other people) is most likely classified as a non-transient non-community water system. However, if your cooperative or a subsidiary supplies water to households with 15 or more service connections or 25 people or more, you are probably a community water system.

Please note that even if the water you supply is originally obtained from another supplier or utility (i.e., is pretreated, stored, or delivered prior to your control) you may still be subject to SDWA requirements. However, if all of the following four criteria (found in 40 CFR 141) apply to your system, the system is not a public water supply:

- The system consists only of distribution and storage facilities (i.e., lacks water collection and treatment facilities).
- The system obtains all of its water from a public water system to which NPDWRs (see below) apply (and is not owned or operated by that regulated system).
- The system sells water to any person.
- The system functions as a carrier conveying passengers in interstate commerce.

9.1.1 The PWSS Program and National Primary and Secondary Drinking Water Regulations

Primary and secondary drinking water regulations

Under the PWSS program, EPA establishes National Primary Drinking Water Regulations (NPDWRs) and National Secondary Drinking Water Regulations (NSDWRs). NPDWRs address contaminants that may affect public health; for example, microbiological contaminants such as legionella, or chemical contaminants such as benzene (carcinogen). NSDWRs are designed to protect the public welfare by addressing aesthetic properties of drinking water (e.g., taste or odor). NPDWRs are enforceable regulations, whereas, NSDWRs are not, unless a State adopts one or all of the NSDWRs into regulation (see Section 9.1.2). For this reason, further discussion focuses on NPDWRs.

What are the NPDWRs?

The NPDWRs are a comprehensive set of regulations that apply to public water systems. The NPDWRs set standards for contaminants in drinking water (i.e. drinking water standards), monitoring requirements for those contaminants, public notification requirements (if the contaminants exceed the allowable limits in the water system), and recordkeeping requirements. The current NPDWRs may be found in 40 CFR 141. Monitoring requirements are discussed further in this section, public notification requirements are discussed in Section 9.1.7

Drinking Water Standards

What are MCLs and MCLGs?

Drinking water standards in the NPDWRs are expressed as maximum contaminant levels (MCLs) or maximum contaminant level goals (MCLGs). An MCLG is

COMPLIANCE REQUIREMENT

The MCL is enforceable and is thereby the limit to which you must comply. MCLGs are non-enforceable health goals.

defined as “the maximum level of a contaminant in drinking water at which no known or anticipated adverse effect on the health of persons would occur, and which allows an adequate margin of safety” (40 CFR 141.2). An MCL is generally described as the maximum permissible level of a contaminant in drinking water that is delivered to the free flowing outlet of the ultimate user of a public water system.

Alternative
to MCL or
MCLG

In lieu of an MCL, EPA may specify a treatment technique such as filtration. The latter is done in situations where monitoring for a specific contaminant at a concentration above the MCL or MCLG is not economically or technologically feasible.

MCLs, MCLGs, and treatment techniques contained in the NPDWRs vary with respect to applicability (i.e., according to the type of source water and treatment system you have, and the size of the population served). Requirements for scheduling, monitoring frequency, and public notification also vary with respect to applicability. Some components of the NPDWRs may or may not apply to your system. For reasons of brevity, specific drinking water standards are not presented in this section, and it is recommended that you consult the regulations.

Monitoring Requirements

Monitoring requirements in the NPDWRs were developed for the purpose of determining compliance with MCLs, and also for collecting data on occurrence of unregulated contaminants (also see Section 9.1.3 for future monitoring requirements). Sampling and analytical methods as well as frequency required for monitoring are specified in 40 CFR 140.

SDWA
requires
EPA to
develop a
nationwide
contam-
inant
occurrence
database.

The 1996 amendments to the SDWA authorized EPA to develop a new database with information on the occurrence of contaminants in public water systems nationwide. The database will be comprised primarily of monitoring data on the occurrence of unregulated contaminants in public water systems, but also may include data for regulated contaminants. In developing the database, EPA will select contaminants for monitoring based on recommendations from the Science Advisory Board and other interested parties. EPA will review and modify the monitoring list on a five-year basis, and will use the database primarily in developing standards and evaluating health risks, as well as possibly for determining compliance.

The SDWA amendments stipulate that monitoring requirements for the new contaminant occurrence database will vary based on system size, source water, and the likelihood of the presence of contaminants.

However, specific details of the monitoring requirements are not likely to be developed until August 1999, when the occurrence database is scheduled to be available. The SDWA amendments also stipulate that the public must be notified of the availability of the monitoring results.

Monitoring
require-
ments to
support the
database
for small
systems

Small water systems, serving under 10,000, have not yet been required by EPA to monitor for unregulated contaminants. However, in association with development of the new contaminant occurrence database, small systems may be required to do so in the future. EPA will decide which public water systems will comprise the “representative sample.” To facilitate monitoring for unregulated contaminants in small and medium drinking water systems, the SDWA amendments contain requirements for obtaining a representative sample of those systems. Under the new monitoring requirements, you may be required to install treatment or technologies, and conduct monitoring associated with the treatment or new technology. However, EPA must provide the funding for such efforts.

9.1.2 State Primacy/Stringency Requirements

The SDWA regulations are enforced by the EPA, and by States with approved SDWA PWSS programs. Under the SDWA, States apply to EPA to manage and implement the PWSS program. To have an approved program, States must have laws and regulations in place that are at least as stringent as the Federal regulations. States with approved programs are considered to have “primacy.” If a State does not have primacy, the EPA Region implements and manages the PWSS program in the State.

In addition to the Federal SDWA regulations, States can also have additional regulations that apply to public drinking water systems. For example, a State may adopt a NSDWR into regulation, thus making it an enforceable provision. As a result, if you supply drinking water, you are likely to be subject to Federal and State requirements. Keep in mind that State requirements can be more stringent; for example, some States define PWSs as having only one service connection. It is recommended that you contact your State drinking water agency to determine whether your State has primacy, and to become familiar with additional requirements.

9.1.3 Future Contaminants to be Regulated (Schedule)

Throughout the next decade, the EPA will be rapidly developing and refining regulations under the SDWA. Table 9-1 provides a current schedule for this activity. An awareness of the forthcoming regulations is crucial for you to successfully manage your water supply into the future.

In this way, you can be better prepared in terms of the technical and financial resources necessary to meet future requirements.

The 1996 amendments to the SDWA significantly altered the schedule for EPA to evaluate new contaminants for regulation. Under the 1986 SDWA, EPA was required to regulate 25 new contaminants every three years. The 1996 requirements replaced this schedule, requiring EPA to determine whether or not to regulate at least five of the contaminants listed as potential contaminants for regulation. In addition to this contaminant selection schedule, the SDWA contains specific provisions for EPA to develop standards for various contaminants. These contaminants and the schedule for regulatory development are listed in Table 9-1.

The list of future regulations provided in Table 9-1 is intended to provide a general idea of the types of requirements which may apply to your PWS. Any future regulations are subject to modifications inherent in the rulemaking process. For more detail on the requirements, it is recommended that you call the SDWA hotline at 1-800-426-4791.

USEFUL TIP

As a PWS, your cooperative should be aware that in addition to the forthcoming regulations listed in the table below, EPA may, at any time, establish an interim NPDWR in response to an urgent threat to public health. Interim NPDWRs are to be revised or finalized 5 years after being established.

9.1.4 How Does EPA Develop Standards and Regulations?

When EPA develops new regulations, it must follow specific procedures which allow for input from the public and regulated community. A potential new regulation is first published as a “proposed rule” in the *Federal Register*. A public comment period follows the publication of a proposed rule. During the public comment period you may express your concerns about the proposed rule and provide input. Prior to finalizing a rule, EPA must address your comments. By taking advantage of available information and the opportunity for public comment, your cooperative can be an informed participant in upcoming drinking water standards development and rulemaking.

Criteria for
deciding to
regulate a
contam-
inant

EPA must base a decision on whether or not to regulate a contaminant (i.e., establish standards, and monitoring, notification, and recordkeeping

Table 9-1. EPA Schedule for Regulating New Contaminants

Contaminant or Regulation	Regulatory Action	Scheduled Release Date
Arsenic	Develop a Health Effects Study Plan	February 1997
	Proposed Arsenic NPDWR	January 1, 2000
	Final Arsenic NPDWR	January 1, 2001
Recycling of filter backwash water	EPA must develop regulation for recycling of filter backwash unless it is addressed in the Enhanced Surface Water Treatment Rule (see below)	August 6, 2000
Sulfate	Conduct a dose-response study	February 2, 1999
	Determine whether to regulate	August 6, 2001
Radionuclides	Decide whether to revise NPDWRs for radium and alpha, beta, and photon emitters, and finalize the NPDWR for uranium	November 2000
Radon	Develop health risk reduction and cost analysis for potential MCLs being considered for radon in drinking water.	February 6, 1999
	Propose an MCLG and an NPDWR	August 6, 1999
	Promulgate a Final MCLG and NPDWR	August 6, 2000
Information Collection Rule (ICR)	The ICR was promulgated in May 1996 and consists of a requirements to collect data to establish the Stage II Disinfection/Disinfection By-product Rule and the interim and final ESWTRs. (See 40 CFR 141 for details)	Data available mid 1999 or later.
Disinfection/Disinfection by-products Rule (Stage I and Stage II)	Promulgate final Stage I (Stage I was proposed in July 1994 and included enhanced coagulation requirements for systems with conventional treatment; MCLs for certain disinfectant by-products, and limits for disinfectants for all systems except transient non-community water systems.)	November 1998
	Notice of availability for Stage II reproposal. (Stage II was proposed in July 1994 and included MCLs made more stringent than the Stage I requirements and established "best available technology" as precursor removal with chlorination)	May 1999
	Promulgate final Stage II	December 2003
Disinfection	Propose a Ground Water Disinfection Rule	December 1998
Enhanced Surface Water Treatment Rule	Promulgate interim ESWTR for systems serving more than 10,000 people	November 1998
	Propose long-term ESWTR for systems serving fewer than 10,000 people and propose possible changes for systems serving more than 10,000 people	May 1999
	Make interim ESWTR effective for systems serving more than 10,000 people	May 2000
	Promulgate long-term ESWTR	November 2000
	Make long-term ESWTR effective for all systems	May 2002
List of 83 contaminants (from 1986 amendments)	Complete regulations for contaminants on list	June 1999

requirements) according to the following criteria: 1) the contaminant would adversely affect human health, 2) there is a high probability of frequent occurrence at significant levels, and 3) the regulation would represent a meaningful opportunity for health risk reduction. Inherent in this process is prioritization based on risk: the contaminants posing the most apparent risk will be addressed first.

EPA must evaluate cost of any new regulations

To decide whether or not to regulate specific contaminants, EPA will use current drinking water data and “best available peer-reviewed science and supporting studies” in conjunction with the three criteria discussed above. In addition, SDWA 1996 Amendment provisions require that prior to issuing any standards, EPA must develop a cost-benefit analysis. Information used in standards setting and cost-benefit analysis must be made available to the public (including the regulated community). By accessing publicly available information, you can educate yourself on the technical basis of the proposed requirements as well as the associated costs they present to your system.

Time frame for compliance with new regulations

Your cooperative generally has three years to comply with any new drinking water regulations, including new standards and monitoring requirements. In some cases, EPA or States may determine that an earlier date for compliance with a new regulation is practicable. If you are making capital improvements to comply with new standards, you may request and obtain a 2-year extension to comply with the standards. If your system serves under 10,000, you may be eligible (subject to State approval) to monitor less frequently than established by EPA if monitoring done at the time of “greatest vulnerability to the contaminant” fails to detect the parameter of concern. However, this kind of “monitoring relief” will not apply to microbiological contaminants or their indicators, disinfectants, or disinfectant or corrosion byproducts.

9.1.5 Small Systems Technology, Variances, and Exemptions

If your cooperative or water system cannot afford to comply with a standard that is based on technology, you may be eligible for a variance. As a result of the 1996 SDWA amendments, EPA will identify and produce a list of alternative technologies that meet the standards and are affordable to each of the following groups of smaller water systems:

- Systems serving a population of 10,000 or fewer, but more than 3,300.
- A population of 3,300 or fewer but more than 500.
- A population of 500 or fewer but more than 25.

If your cooperative or water system still cannot afford any of the proposed alternative technologies, then EPA or the State having primacy will determine whether other changes (e.g., change in source water, restructuring, or connection to another system) could enable you to meet the standard. If these other changes are not practicable, then EPA or the State having primacy will require the most protective technology that your cooperative or water system can afford.

Further relief may be provided to you if your system serves 3,300 persons or less. In this case, you may be allowed an exemption from a standard for up to nine years if you:

- Serve an economically disadvantaged community;
- Are reasonably likely to obtain financial assistance to comply during the exemption term; and
- Cannot comply by alternative water source or by management or restructuring changes.

Note that you will not be eligible for an exemption if you receive a small system variance.

9.1.6 Reporting Requirements

If you are a PWS (see Section 9.1) then you are subject to reporting requirements that include Public Notification and Consumer Awareness requirements. Consumer Awareness and Public Notification requirements are designed to ensure that the public has the opportunity to make informed decisions about drinking water problems. Consumer awareness is addressed mainly in Consumer Confidence Reports, which inform the public of drinking water monitoring results. Public Notification requirements are triggered by violations of MCLs and other NPDWR requirements.

Consumer Confidence Reports

If you are a community water system (see Section 9.1), you will be required to provide Consumer Confidence Reports to the people served by your system. EPA is in the process of developing requirements for all community water systems to prepare and mail to each customer annually, a report with information about the system's source water and the level of contaminants in the drinking water. In some States, relief from the mailing requirements may be allowed for smaller systems. For instance, if your

system serves less than 500 people, you might only be required to give public notice that the report is available, or if your system serves between 500 and 10,000 people, you might be able to publish the report in the newspaper in lieu of mailing. Your State drinking water agency can tell you if these conditions have been allowed by the Governor of your State. EPA Guidelines for Consumer Confidence Report requirements should be finalized by August 6, 1998, at which time you may obtain them from your State drinking water agency or through the SDWA hotline.

Public Notification Requirements

For any violation of an MCL, the regulations stipulate that you must make an initial notification “as soon as possible” and within specific time-frames. The time-frame as well as the method of the notifications depend on the risk posed to human health as a result of the violation. The required method of notification and the time frame for notification will depend on available means of communication (i.e., television, radio, or newspaper) and whether you are a community or non-community water supply.

Violations Posing Acute Risks

The following violations of MCLs pose an acute risk to human health:

- Nitrate;
- Total coliform, when fecal or *E. coli* are present;
- Occurrence of a waterborne disease outbreak in any system; and
- Any violations determined by the State as posing acute risk.

For community water systems the initial notification for MCL violations that pose an acute risk must be provided, via television or radio, within 24 hours.

The requirements for follow-up notifications for violations posing an acute risk are:

- Within 14 days, provide notification through the daily newspaper or weekly newspaper (if no daily).
- Within 45 days, provide notification by mail or hand delivery.

USEFUL TIP

If your State has primacy, it may waive the mail or hand delivery requirement (applies to acute or non-acute violations), provided you have corrected the violation or failure within the 45-day period.

- Once every 3 months for as long as violation continues, provide notification by mail or hand delivery.

If you are a non-community water system, or if you are a community water system in an area not served by a daily or weekly newspaper, then you are allowed some relief in that you may give notice by hand delivery or by continuous posting in conspicuous places, in lieu of the follow-up notifications described above. However, you must begin notification not less than 72 hours after discovering a violation that poses an acute health risk to human health.

Violations That Do Not Pose an Acute Risk

For a violation of an MCL that does not pose an acute risk, or a violation of a treatment technique standard, or failure to comply with a schedule prescribed in a variance or exemption, you must provide notifications according to the following time frames and methods:

- Within 14 days, provide notification by daily newspaper or weekly newspaper (if no daily);
- Within 45 days, provide notification by mail or hand delivery; and
- Once every 3 months for as long as violation continues, provide notification by mail or hand delivery.

USEFUL TIP

If your State has primacy, it may allow you to provide less frequent notification for minor violations (i.e., failure to monitor) or the granting of a variance; however, you must obtain State approval and at a minimum you will be required to provide annual notification.

Minor MCL Violations

You must also provide public notification if you:

- Fail to perform monitoring;
- Fail to comply with test procedures;
- Are subject to a variance; or
- Are subject to an exemption.

For these situations in general, you must provide the following notifications:

- Within 3 months of violation or of granting of variance or exemption, provide notice in daily newspaper or weekly newspaper (if no daily); and
- Once every 3 months for as long as the violation exists or variance/exemption remains in effect, provide notice in daily newspaper or weekly newspaper (if no daily) **or**, if you are a non-community water system, or if no daily or weekly newspaper exists, you may provide initial and follow-up notices by hand delivery or continuous posting in conspicuous places.

The content of the notifications is lengthy and specific to the parameter of concern. The exact language can be found in 40 CFR 141.32(d) and (e).

9.1.7 Operator Certification Requirements

If your State does not already have water treatment system operator certification requirements, it will be required to develop them in the near future. The 1996 Amendments of the SDWA include a provision for EPA to develop operator certification guidelines by February 6, 1999. State operator certification programs must then meet the minimum EPA requirements established in the guidelines. Note that the intent of the operator certification requirements is not that every operator must be certified, but that your system should have an operator that is able to perform key compliance functions, and is trained and certified to the level required by your specific State program and for your type of system. When complete, the guidelines should be available either through the SDWA hotline, *Federal Register* Notice, or through your State drinking water agency.

9.1.8 Technical, Financial, and Management Capacity of Water Systems

If your cooperative or a subsidiary supplies drinking water to other businesses or residences, your system is not only subject to drinking water standards, but is subject to EPA or State scrutiny of its technical, financial and managerial capacity to supply water that meets specific SDWA standards. As a result of the 1996 amendments, your State, if it does not already do so, will probably require any new community water system and any new non-transient, non-community water systems (commencing operation after October 1, 1999), to demonstrate sufficient technical, managerial and financial capacity to meet drinking water standards. Note that this does not apply to existing systems.

If your State has primacy, it must develop regulations to carry out this mandate by August 6, 2000, otherwise a portion of Federal funds for your State drinking water authority will be withheld. In addition, by this time, your State is required to have established a means of providing assistance to you in strengthening your existing capacities.

9.1.9 Enforcement

Enforcement of SDWA requirements is the responsibility of EPA or the State having primacy. The 1996 SDWA Amendments improve the enforceability of drinking water standards by streamlining the enforcement process for

EPA, clarifying “enforceable provisions,” and raising penalties and penalty caps. Under the 1996 SDWA Amendments, EPA or your State may impose a penalty to the owner/operator of a public water system as great as \$25,000 per day per violation.

USEFUL TIP

For EPA to take any enforcement action against the owner/operator of a public water system in a State that does not have primacy, EPA must first notify an appropriate elected public official.

However, the 1996 Amendments also allow for a public water system to avoid enforcement actions against it by consolidation (physical or managerial), or by transfer of ownership. Under this provision in the amendments, the public water system must submit a plan which outlines specific measures and schedules for consolidation efforts to EPA for approval. If EPA approves the plan, no enforcement action will be taken.

9.1.10 Bottled Water Standards

Currently, bottled water is regulated by the Food and Drug Administration (FDA). The FDA imposes no standards equivalent to MCLs or MCLGs on bottled water, and largely relies on the industry’s self-monitoring to ensure public health. This may change as a result of the 1996 amendments to the SDWA. Under the SDWA amendments, EPA will be required to regulate the same contaminants in bottled water that they regulate in public water supplies. In effect, the EPA will have to impose standards on bottled water that are no less stringent than established MCLs, and would include monitoring requirements in those standards. In conjunction with this effort, the SDWA amendments require EPA to develop, by February 1998, a draft Bottled Water Consumer Study, which will address methods of informing consumers of the contents of bottled water. EPA will solicit public comment on the report findings and will issue a final report by February 6, 1999.

9.2 OVERVIEW OF PREVENTION PROGRAMS IN SDWA AMENDMENTS OF 1996, AND APPLICABILITY TO COOPERATIVES

In addition to controlling contaminants in drinking water through development of NPDWRs, SDWA Amendments strengthen the preventative measures for maintaining safe drinking water. If your cooperative or its subsidiary is a public water system, you should be concerned with protecting your water supply source.

Preventative measure requirements are included in such programs as:

- Source water protection programs that are specified in the EPA's Watershed Approach (see Section 9.2.1) and the NPDWR commonly referred to as the Surface Water Treatment Rule (SWTR);
- Sole Source Aquifers program (see Section 9.2.2);
- Wellhead Protection Program (see Section 9.2.3); and
- Underground Injection Control program (see Section 9.2.4).

Of these programs, the Wellhead Protection and Sole Source Aquifer programs provide the most opportunity for you to participate in protection of your water supply. The Underground Injection Control (UIC) program pertains to entities disposing of wastes (discussed in Chapter 8), rather than PWSs. The UIC program may be implemented by your State, but will reflect minimum federal requirements.

9.2.1 Watershed Approach Program

The "Watershed Approach" Program is one of the foremost strategies EPA uses to address water quality issues. The Watershed Approach is a framework for environmental management that focuses public and private sector efforts to address the highest priority problems within watersheds. The program addresses both surface and ground water flow. Watershed protection activities address drinking water supply as well as waste disposal. Pollution sources from all media

USEFUL TIP

You can become familiar with your watershed through the use of EPA's interactive internet web site "Surf your Watershed." This tool will allow you to access maps, information on land use, environmental indicators and a variety of other site-specific information (see Section 9.4, Resources).

(air, soil, water) are covered in the program. To the cooperative that supplies water to its employees or to the public, watershed protection is EPA's broad effort at protecting your drinking water supply source.

9.2.2 Sole Source Aquifer Program

An aquifer is a natural underground layer of porous materials containing some type of liquid (water, oil, etc.) usually capable of yielding a large amount, or supply, of that liquid. Groundwater is water contained in an aquifer. The EPA defines a sole source aquifer as an aquifer which supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer, and these areas have no alternative drinking water sources which could physically, legally, and economically supply all those who depend upon the aquifer for drinking water.

When an aquifer is designated by EPA or the State as a sole source (for drinking water) (see box), no federal activity or activity receiving federal financial assistance may be conducted if the EPA Regional Administrator determines the activity may contaminate the aquifer. What this means to your cooperative, as a public water supply, is that your water source may be afforded extra protection intended to prevent contamination.

USEFUL TIP

EPA will only designate Sole Source Aquifers in response to petitions. Therefore it is up to you to seek this form of protection for your water supply, whether you supply water only for your employees or to others as well.

Submitting
a petition
for sole
source
aquifer
designation

If your water source is ground water and you believe that it is a sole source, **you can petition the Regional Administrator to make such a designation.** In your petition, you must provide hydrogeologic and drinking water usage data and other technical and administrative information supporting the definition of "sole source aquifer." Detailed information to include in petitions, as well as the procedures and criteria for determining aquifer boundaries may be found in "Sole Source Aquifer Designation Petitioner Guidance," available from EPA Office of Water Resource Center (see Section 9.4). Your state may also have a Sole Source Aquifer program, thus you should check with your drinking water agency to determine the role of such programs with respect to petitions.

The time frame for making a sole source aquifer determination will vary, but generally it takes a minimum of six months following submittal of the petition. EPA reviews the documented information on the boundaries, hydrogeologic materials, and water use patterns of an area's aquifer. EPA summarizes the results of the review in a technical support

document that is made available for public review. Final designations, along with a summary of the basis of decision are noticed in the *Federal Register*.

9.2.3 Wellhead Protection

A wellhead is defined as the physical structure, facility or device at the land surface from or through which groundwater flows or is pumped from subsurface, water-bearing formations. Under the SDWA, Wellhead Protection Programs receive Federal guidance and funding, but are generally administered at the State level. Wellhead Protection is a voluntary, community-based effort to protect groundwater sources of drinking water from all potential sources of contamination. Participation in a Wellhead Protection Program offers an excellent opportunity for your cooperative to collaborate with the community and government.

Wellhead Protection process

The general process of Wellhead Protection includes 1) forming a team consisting of water suppliers, local elected and non-elected officials, businesses, farmers, environmental groups, land developers, and other interested parties; 2) delineating the Wellhead Protection Area (WHPA), 3) identifying all sources of potential contaminants, and 4) selecting management strategies to protect the WHPA. If you would like to initiate a Wellhead Protection Program, EPA offers assistance in the form of guidance materials, which can be obtained from the Office of Water Resource Center (see Section 9.4). In addition, your State may have developed its own guidance or funding assistance programs under the Wellhead Protection Program.

9.2.4 Underground Injection Control Program

The UIC program is intended to protect groundwater supplies from activities which involve emplacement of waste materials into the ground. The UIC program is generally administered by the EPA Region or State. State requirements will vary, but at a minimum must reflect the requirements for waste injection disposal outlined in 40 CFR 144.1.

The types of activities covered by UIC regulations involve five categories of injection of hazardous wastes, or larger-scale emplacement of non-hazardous wastes. The regulations do not address single family waste disposal systems or non-residential sanitary waste disposal systems with a capacity to serve fewer than 20 people per day. Within the UIC program, well injection may be authorized by permit or by rule (an abbreviated approval method). As a public water supply, you will benefit

from the protection of groundwater afforded by regulation of activities posing the greatest potential for groundwater contamination.

9.3 FUNDING AND ADDITIONAL ASSISTANCE FOR WATER INFRASTRUCTURE AND WATERSHEDS

Federal appropriations are made to States having primacy for the purpose of administering the PWSS program. This system is known as the State Revolving Fund (SRF). The State may issue grants for projects designed to achieve compliance, or for prevention programs (e.g. source water protection, capacity development, or operator certification). Grants are issued based on a projects' ability to address the seriousness of health risk, compliance needs (including filtration), and system economic need (calculated on a per-household basis). The SRF may also be used to provide loan subsidies and loan forgiveness to disadvantaged communities. In some cases, States may allocate SRFs to other programs which issue grants, such as the Sole Source Aquifer and Wellhead Protection programs. In addition to State Grants, EPA or other organizations may on occasion award grants to systems under various programs. To find out more about grants and how to obtain them, contact your drinking water permitting agency or the associations listed under Resources (9.4).

9.4 RESOURCES

Your primary resource for drinking water issues should be your State Drinking Water Agency. In addition, your EPA Regional Office can assist you and refer you appropriately. The following list provides other sources of information.

9.4.1 EPA Assistance

EPA Office of Groundwater and Drinking Water (OGWDW)

SDWA Hotline: (800) 426-4791 (Will provide contacts for State or Regional permitting agencies)

Office of Water Resource Center: (202) 260-7786

9.4.2 Regulations

NPDWRs: 40 CFR Part 141

NSDWRs: 40 CFR Part 143

9.4.3 References

Future Directions in Water Quality Regulations, Pontius, F.W., 1997. (Journal AWWA, Vol. 89, Issue 3).

Protecting Local Ground-Water Supplies through Wellhead Protection, 1991. (EPA 570/09/91/007).

Locating Financing for Wellhead Protection, 1989. EPA 440-6-89-001. Office of Ground Water Protection, Office of Water, U.S. Environmental Protection Agency.

Wellhead Protection Programs: Tools for Local Government Governments. April 1989. EPA 440/6-89-002. Office of Ground Water Protection, Office of Water, U.S. Environmental Protection Agency.

EPA documents are available from the OGWDW internet site:
<http://www.epa.gov.OGWDW/Pubs/08ground.html>

List of National Primary Drinking Water Standards (i.e., MCLs and MCLGs): available from EPA through the SDWA Hotline.

Publications also can be obtained from the Office of Water Resource Center.



9.4.4 Internet Sites

Surf Your Watershed: <http://www.epa.gov/surf/>

EPA Office of Groundwater and Drinking Water
<http://www.epa.gov/ogwdw/programs.html>

9.4.5 Organizations

The Association of Metropolitan Water Agencies
1717 K Street, NW, Suite 801
Washington, DC 20036
(202) 331-2820

The American Water Works Association
1401 New York Avenue, NW, Suite 640
Washington, DC 20005
(202) 628-8303

